PROCESS FOR CREATING AN ELECTRICALLY ISOLATED ELECTRODE ON A SIDEWALL OF A CAVITY IN A BASE

ABSTRACT OF THE DISCLOSURE

A microelectromechanical (MEMS) apparatus has a base and a flap with a portion coupled to the base may be fabricated by an inventive process. The process generally involves etching one or more trenches in a backside of a base, e.g., by anisotropic etch. The trench may be etched such that an orientation of a sidewall is defined by a crystal orientation of the base material. A layer of insulating material is formed on one or more sidewalls of one or more of the trenches. A conductive layer is formed on the layer of insulating material on one or more sidewalls of one or more of the trenches. The conductive layer may completely fill up the trench between the insulating materials on the sidewalls to provide the isolated electrode. Base material is removed from a portion of the base bordered by the one or more trenches to form a cavity in the base. The trench etch may stop on an etch-stop layer so that the cavity does not form all the way through the base.